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[12]实用新型专利说明书

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[54]实用新型名称 可兼容式便携杯

[57]摘要

一种可被压缩体积的可兼容式便携杯，它是在主杯体连体杯壁上制以多道基折 节(2)及与其相应配合的小圆弧基折线(3)、可将各道基折节由小圆弧基 折线上分别折叠并套入主杯体内侧，由此促使主杯体减小大量体积；杯口设置 杯盖(9)，杯盖周边连体的内翻口(5)和下面连体的加密环(6)、与主 杯体的外翻口(1)相对应的咬合，使主杯体内部密闭，达到方便携带和可兼 容使用的目的。

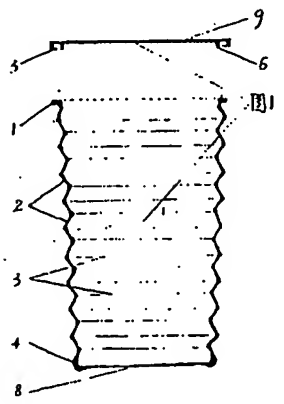

图1

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权 利 要 求 书

1、一种可兼容式便携杯，主杯体多道基折节分别由基折线连体为曲线状杯壁，杯壁的上口连体外翻口，下连体加强底及杯底，杯壁外翻口上配置密口的连体内翻口与加密环的杯盖，其特征是：外翻口内圈往下连体一道外倾基折节、连体一道小外弧基折线、又连体一道内倾基折节、又连体一道小内弧基折线，再又连体一道外倾基折节及重复以上方式连体至相应杯高，由一道小内弧基折线连体于加强底及杯底；杯盖周边连体内翻口，下面连体一道加密环。

2、根据权利要求1所述的可兼容式便携杯，其特征是：外倾基折节由上向下朝杯外倾出，内倾基折节由上向下朝杯内倾入；小外弧基折线圆心在杯体内，小内弧基折线圆心在杯体外。

3、根据权利要求1所述的可兼容式便携杯，其特征是：内翻口包咬外翻口，加密环紧套外翻口内圈内。

4、根据权利要求1所述的可兼容式便携杯，其特征是：上一道基折节通径大于往下相邻一道基折节通径；外倾基折节节高高于内倾基折节节高；加强底节高高于外倾基折节节高。

00-07-04

说 明 书

可兼容式便携杯

本实用新型涉及一种被动缩节且能兼容某种物质的、可一次性使用的便携杯具。

日常生活中，公知的饮用杯具有多种多样，给人们日常的应用带来了一定程度的方便，然而，目前所仅有的通用式杯具中，尚没有一种可以由增减体积而达到方便携带和即冲饮目的的杯具体现，这样，未免就是一种方式上的缺憾了。诚然，一般通用式杯具的体裁是简单的，问题是如何来引伸一种既可以便携又可以简洁应用的概念，而加以弥补这一缺憾呢？

本实用新型的目的即是提供一种基折节被动压缩和可兼容的、释节后可经由开水冲泡的可一次性使用的便携杯具。它的特点是：便携、可贮、耐温、卫生和可一次性使用。

本实用新型的目的是这样来实现的：将符合卫生条件同时又具备一定刚性、弹性、韧性和耐温性的有关材料，加工制作成一个杯壁由互为曲折的若干道基本折叠节、及配合转折串连体的小圆弧基折线的口大底小的异径圆杯具，再由基折线将每道基折节分别被动缩节即强制折叠并套镶入杯体内侧，使原杯体体积缩节成倒宝塔形最小体积状态。缩节后的杯体，内部仍有的空容积为可贮藏容积，杯口加盖后即成本体便携杯。使用时只要将被动缩节拉开即成现成杯本体。

由于采用上述方案，成杯不但方便于日常携带，兼容内贮后尤可丰富生活所需，操作简单灵便。

下面结合附图对本实施例作进一步说明。

图 1 是本实用新型主杯体及盖的纵剖示意图。

图 2 是主杯体的平面示意图。

图 3 是缩节便携杯实施例纵剖示意图。

图中 1.外翻口　2.基折节　3.基折线　4.加强底　5.内翻口　6.加密环　7.缩节便携体　8.杯底　9.杯盖

在图 1 中，外翻口(1)、基折节(2)、基折线(3)、加强底(4)和杯底(8)分别为主杯体整体的局部，主杯体杯壁曲线走势。外翻口(1)是主杯体向外翻卷的杯口,内圈往下连体主杯体最上一道外倾基折节(2)，由此基折节(2)向下连体一道小外弧基折线(3)，又由此基折线(3)向下连体一道向下内倾的另一基折节(2)，再又由此基折节(2)往下连体另一道小内弧基折线(3)，以此一道复一道往下串连体后由一道小内弧基折线往下连体于加强底(4)及杯底(8)成杯。由上而下的基折节(2)逐减通径量，相邻间减量为壁厚的 1 倍，呈口大底小状；外倾基折节节高略高于内倾基折节，折叠后小外弧基折线屈径外突。内翻口(5)、加密环(6)并连体于杯盖(9)，杯盖(9)周边部向下折转再向内折转为含咬形内翻口，近内翻口(5)的杯盖下面连体一道加密环(6)，加密环可紧套于主体杯外翻口(1)内圈，同时内翻口(5)可含包住主杯体外翻口(1)，相对配合主杯体与杯盖之间密闭。基折节(2)的全称为基本折叠节，有外倾和内倾分别；基折线全称为小圆弧基本折拗线，有内弧外弧分别。加强底(4)相应增加厚度、硬度，节高大于外倾基折节节高。

在图 2 中，主杯体的外翻口(1)为翻边环口、与其相连体的多道基折节(2)逐减径量往内连体于杯底(8)，布成杯体。

在图 3 所示实施例中，缩节便携体(7)由若干道基折节于小圆弧基折线上折叠并紧贴镶套于杯体内侧，主杯体体积被大量减小，加强底(4)与杯底(8)突露于缩节便携体(7)的下部，缩节便携体上部由杯盖(9)及相应的连体部件与外翻口咬合，内部存留空间作可兼容容积。

说　明　书　附　图

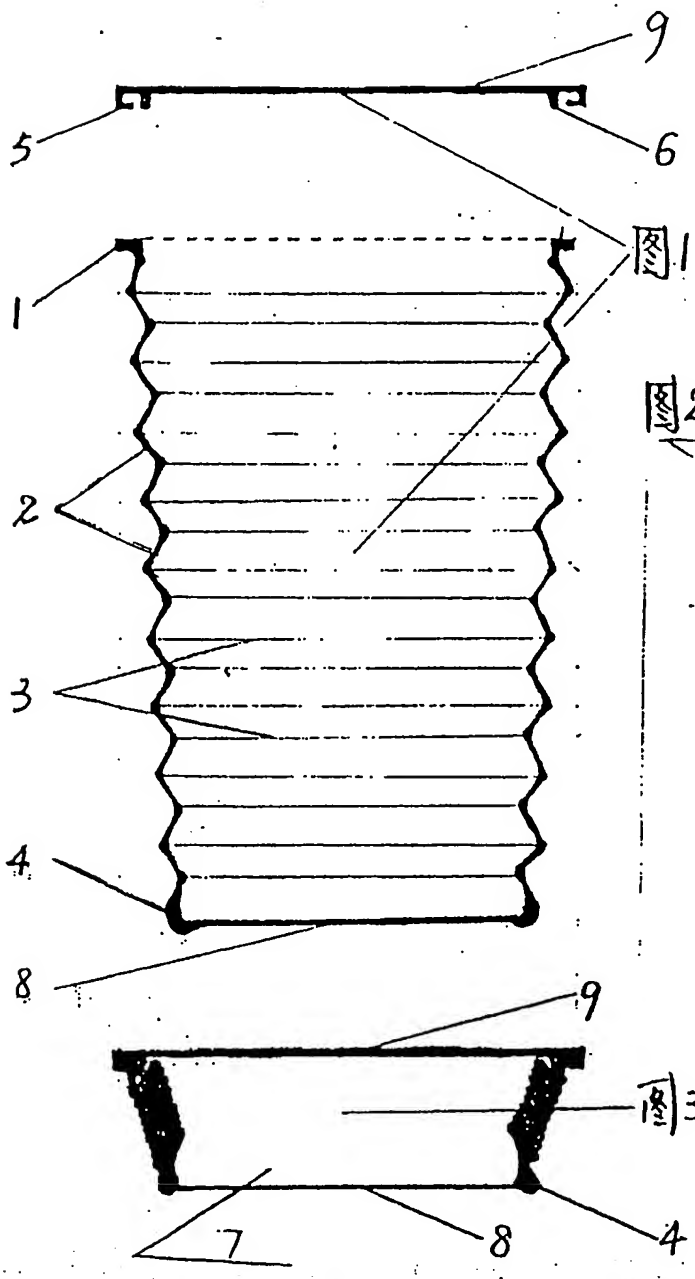

图1

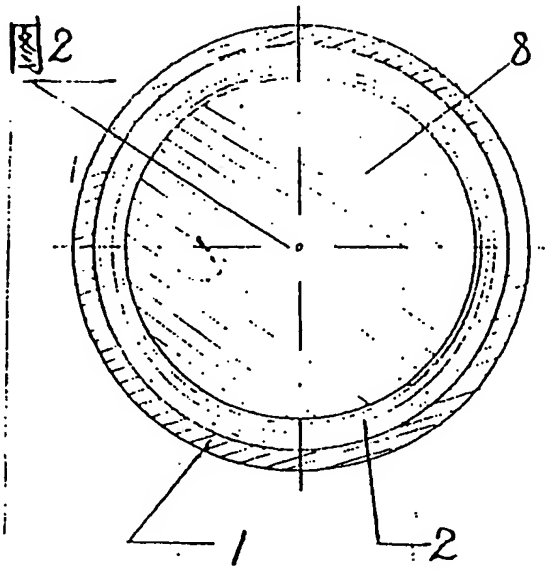

图2

图3

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[12] Utility Model Patent Description

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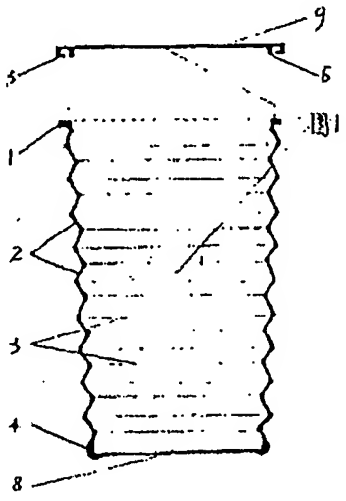
1 Page of Claims, 1 page of Description and 1 page of Figures

[54] Title of the Invention: A portable cup for containing different kinds of beverages

[57] Abstract:

This utility model relates to a portable cup whose size can be forcibly collapsed, and which can be used to contain different kinds of beverages. The wall of the main body of the cup comprises a number of basic folded grooves (2) and corresponding basic folded circular arcs (3), and the basic folded circular arcs can be used to forcibly collapse the basic folded grooves into stacks and to pack them inside the main body of the cup, thereby collapsing the size of the cup. There is a cover (9) at the opening. The internal catch (5) attached at the edge of the cover and sealing ring (6) beneath the cover are locked onto the external catch (1) on the main body, thereby sealing the internal part of the main body, and creating a cup that is portable and can be used to contain different kinds of beverages.



Claims

1. A portable cup that can be used to contain different kinds of beverages, wherein the main body of the cup comprises a number of basic folded grooves and corresponding basic folded circular arcs to form a curved wall, an external catch is attached to the top opening of the wall, a reinforced base and base is attached to the bottom of the wall, and the external catch is connected to a cover that is installed with an internal catch and a sealing ring in order to seal the cup, characterized in that: the inner ring is connected to the uppermost basic folded groove that is slanted outwards, the basic folded groove is connected downward to a basic folded external circular arc, the basic folded external circular arc is connected downward to the next basic folded groove that is slanted inwards, the next basic folded groove that is slanted inwards is connected downward to the next basic folded internal circular arc, the next basic folded internal circular arc is connected to the next basic folded groove, and the pattern continues until the entire wall is completed, and the last basic folded internal circular arc is connected downward to the reinforced base and base; an internal catch is connected to the edge of the cover and a sealing ring is attached beneath the cover.

2. The portable cup that can be used to contain different kinds of beverages according to Claim 1, characterized in that: the basic folded groove that is slanted outwards inclines outwards from the top to the bottom, the basic folded groove that is slanted inwards inclines inwards from the top to the bottom, the center of the basic folded internal circular arc is inside the body of the cup, and the center of the basic folded external circular arc is outside the body of the cup.

3. The portable cup that can be used to contain different kinds of beverages according to Claim 1, characterized in that: the internal catch locks on to the external catch, and the sealing ring is firmly fastened to the internal ring of the external catch.

4. The portable cup that can be used to contain different kinds of beverages according to Claim 1, characterized in that: the diameter of each basic folded groove is larger than the diameter of the lower adjoining basic folded groove, the height of the basic folded groove that is

slanted outwards is larger than the height of the basic folded groove that is slanted inwards, and the height of the reinforced base is larger than the height of the basic folded groove that slants outwards.

A PORTABLE CUP FOR CONTAINING DIFFERENT KINDS OF BEVERAGES

This utility model relates to a single-use portable cup that is forcibly collapsible, and can be used to contain different kinds of beverages.

In daily life, there is a huge variety of commonly known cups that are used for drinking, which bring about a certain degree of convenience to the daily activities of people. Nevertheless, there are no cups among the models of cups currently available whose size can be adjusted so that they can become portable and can be used to contain instant drinks. This would be a structural defect that needs to be improved. Generally, most cups are designed in simple forms, and the issue that must be solved is an idea for a cup that is portable and easy to use at the same time, thereby resolving the aforesaid defect.

The objective of this utility model is to provide a single-use portable cup for preparing drinks with boiling water, wherein the basic folded groove of the cup is forcibly collapsible and the cup can be used to contain different kinds of beverages. It has the following characteristics: portable, storable, heat-resistant, hygienic, and single use.

The objective of this utility model is implemented in the following manner. A material that meets the conditions of hygiene, and that possesses a certain degree of rigidity, elasticity, ductility, and resistance to heat at the same time, is processed to make a tapering conical cup that has a small base and a big opening, wherein the wall of the cup comprises a plurality of basic folded grooves that correspond to a consecutive series of small basic folded circular arcs, and then the basic folded circular arcs are used to forcibly collapse the folded grooves into stacks and to pack them inside the main body of the cup, thereby collapsing the size of the cup into the

minimum size of an inverted pyramid. After the cup is collapsed, the empty space remaining inside the cup is the storage space, and after a cover is added to the opening, the portable cup in the present utility model is obtained. In order to use the cup, it is only necessary to pull out the collapsed grooves and restore the cup to its original size.

A cup designed according to the method described above that may be easily carried in a person's daily life and can contain different kinds of beverages, thereby enriching a person's daily lifestyle. It is easy and convenient to operate this utility model.

The working example for this utility model is described in greater details below together with the help of the attached diagrams.

Fig. 1 refers to the cross-sectional view of the main body and cover for the cup in this utility model.

Fig. 2 refers to the schematic diagram for the plane view of the main body of the cup in this utility model.

Fig. 3 refers to the cross-sectional view of the collapsed portable cup in this working example.

In the diagrams, the components are referred to as follows:

(1) External catch

(2) Basic folded groove

(3) Basic folded circular arc

(4) Reinforced base

(5) Internal catch

(6) Sealing ring

(7) Collapsed portable structure

(8) Base

(9) Cover

In Fig. 1, the external catch (1), basic folded groove (2), basic folded circular arc (3), reinforced base (4) and base (8) are components of the main body of the cup, and the wall of the main body of the cup has a curved structure. The external catch (1) is the mouth of the cup that is folded outwards from the main body of the cup, while the inner ring is connected to the uppermost basic folded groove (2) that is slanted outwards, the basic folded groove (2) is connected downward to a basic folded external circular arc (3), the basic folded external circular arc (3) is connected downward to the next basic folded groove (2) that is slanted inwards, and the next basic folded groove (2) that is slanted inwards is connected downward to the next basic folded internal circular arc (3). The pattern continues until the last basic folded circular arc (3) is connected downward to the reinforced base (4) and base (8), thereby forming the cup. The diameter of the basic folded groove (2) decreases from top to bottom, and the decrease between adjoining grooves is equivalent to twice the wall thickness, and the cup assumes a structure where the opening is big and the base is small. The internal catch (5) and the sealing ring (6) are connected to the cover (9), and the edge of the cover (9) is folded downwards and then folded inwards to form an internal catch (5) that has a gear-like structure. A sealing ring (6) is connected beneath the cover (9) near to the internal catch (5). The sealing ring can be firmly fastened to the inner ring of the external catch (1) of the main body of the cup, and the internal catch (5) can lock on to the external catch (1), thereby causing the main body and the cover to be firmly sealed together. The entire basic folded groove (2) comprises a folded section that inclines inwards and a folded section that inclines outwards. The entire basic folded circular arc (3) comprises internal circular arcs and external circular arcs. The reinforced base (4) increases the

thickness and hardness correspondingly, and the height of the section is larger than the height of the basic folded groove that extends outwards.

In Fig. 2, the external catch (1) of the main body is the circular opening at the edge, which is connected downward to the basic folded grooves (2) which decrease in diameter from top to bottom, until reaching the base (8) and forming the cup.

In the working example shown in Fig. 3, the collapsed portable structure (7) is formed by using the basic folded circular arcs to forcibly collapse the folded grooves into stacks and to pack them inside the main body of the cup. The size of the cup is therefore collapsed, and the reinforced base (4) and base (8) protrude from the bottom of the collapsed portable structure (7). The top of the collapsed portable structure (7) is sealed when the cover (9) and adjoining components are locked onto the external catch, and the space inside can be used to contain different kinds of beverages.

Diagrams Attached to the Description

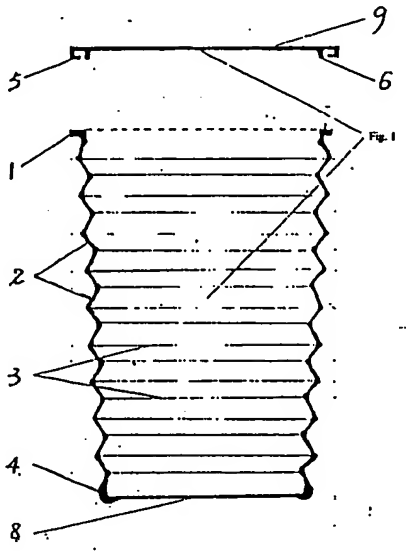


Fig. 1

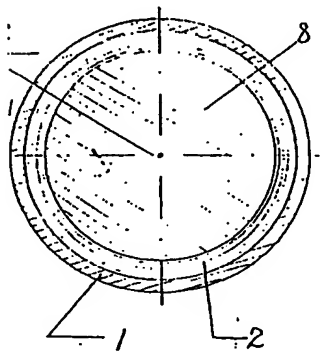


Fig. 2

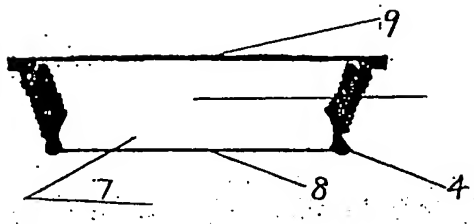


Fig. 3